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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,268	03/12/2004	Jae-seong Shim	1793.1202	5853
49455 7590 01/23/2008 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			EXAMINER GIESY, ADAM	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 01/23/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,268	SHIM ET AL.	
	Examiner	Art Unit	
	Adam R. Giesy	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 21-40 and 57-75 is/are pending in the application.
- 4a) Of the above claim(s) 7-18, 24-35 and 63-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 6, 19, 21-23, 36, 37, 40, 57, 58, 61, 62 and 75 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 38, 39, 59 and 60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 5, 40, and 61 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 5, 40, and 61 all only recite that "the second recognizer is located in a rear part of the head" while parent claims 1, 36, and 57 (respectively) also recite that "the second recognizer is located in a rear part of the head".

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, 6, 19, 21-23, 36, 37, 40, 57, 58, 61, 62, and 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanoue et al. (hereinafter Tanoue – US Pat. No. 6,657,937 B2).

Regarding claim 1, Tanoue discloses an information storage medium in which data is recorded in recording units, each of the recording units comprising: a body including user data (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA') and a first recognizer ('PS'); and a head which is arranged in front of the body ('HEADER FIELD') and includes a second recognizer other than the first recognizer that

is unique such that the second recognizer cannot be detected from any other patterns in the body ('HF3' and 'HF4' – note that both HF3 and HF4 contain an address mark [see 'AM'] that is a unique violation pattern; see abstract; see also column 5, lines 32-43), wherein a number of maximum length patterns used to form the second recognizer is greater than a number of maximum length patterns used to form the first recognizer so that the second recognizer is distinguished from the first recognizer (see also column 5, lines 32-43; see also column 9, lines 12-16 – note that the address mark is 22T in length which is longer than any other pit), and the second recognizer is disposed in a rear part of the head and comprises a head closing mark, which marks a closing of a head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of "rear" is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets "rear" to mean 'anywhere within'. Examiner further notes that since there Figure 4 shows that the 'HEADER FIELD' comprises HF1, HF2, HF3, and HF4, then HF4 must signal the end of the 'HEADER FIELD').

Regarding claim 2, Tanoue discloses all the limitations of claim 1 as described in the claim 1 rejection above, and further the recording unit further comprises a tail which is arranged behind the body (see Figure 4, elements labeled 'PA3', 'GUARD2', and 'BUFFER') and includes a third recognizer ('PA3').

Regarding claim 5, Tanoue discloses all the limitations of claim 1 as described in the claim 1 rejection above, and further that the second recognizer is located in a rear part of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of “rear” is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets “rear” to mean ‘anywhere within’).

Regarding claim 6, Tanoue discloses all the limitations of claim 1 as described in the claim 1 rejection above, and further a mark or a pit with a specific length is repeatedly recorded for a length of a number of bytes in the head for a data phase locked loop (column 5, lines 27-30).

Regarding claim 19, Tanoue discloses an information storage medium in which data is recorded in recording units, each of the recording units comprising: a body including user data, an error correction parity, and an error correction code (ECC) sync (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA'; see also column 6, lines 17-23); and a head which is disposed in front of the body (Figure 4, 'HEADER FIELD'), wherein the head includes a head identifying pattern which is unique such that the head identifying pattern cannot be detected from any other patterns in the body ('HF3' and 'HF4' – note that both HF3 and HF4 contain an address mark [see 'AM'] that is a unique violation pattern; see abstract; see also column 5, lines 32-43), and the head identifying pattern is disposed in a rear part of the head and comprises a head

closing mark, which marks a closing of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of "rear" is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets "rear" to mean 'anywhere within'. Examiner further notes that since there Figure 4 shows that the 'HEADER FIELD' comprises HF1, HF2, HF3, and HF4, then HF4 must signal the end of the 'HEADER FIELD').

Regarding claim 21, Tanoue discloses all the limitations of claim 19 as described in the claim 19 rejection above, and further that the head closing mark comprises more patterns than a number of maximum length patterns used to form the ECC sync so that the head closing mark is distinguished from the ECC sync (Figure 4, 'PID1' and 'PA1'; see also column 6, lines 17-23).

Regarding claim 22, Tanoue discloses all the limitations of claim 19 as described in the claim 19 rejection above, and further that each of the recording units further comprises a tail which is disposed behind the body (Figure 4, 'PA3', 'GUARD2', and 'BUFFER') and includes a tail opening mark, which marks a closing of the tail (PA3).

Regarding claim 23, Tanoue discloses all the limitations of claim 19 as described in the claim 19 rejection above, and further that a mark or a pit with a specific length is repeatedly recorded for a length of A number of bytes in the head for a data phase locked loop (column 5, lines 27-30).

Regarding claim 36, Tanoue discloses an apparatus for reproducing data recorded on a disk in recording units, each of the recording units comprising: a body including user data and a first recognizer (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA'); and a head which is disposed in front of the body and includes a second recognizer other than the first recognizer that is unique such that the head identifying pattern cannot be detected from any other patterns in the body (see Figure 4, elements 'HEADER FIELD', 'HF3', and 'HF4' – note that both HF3 and HF4 contain an address mark [see 'AM'] that is a unique violation pattern; see abstract; see also column 5, lines 32-43), wherein a number of maximum length patterns used to form the second recognizer is greater than a number of maximum length patterns used to form the first recognizer so that the second recognizer is distinguished from the first recognizer (see also column 5, lines 32-43; see also column 9, lines 12-16 – note that the address mark is 22T in length which is longer than any other pit) and the second recognizer is disposed in a rear part of the head and comprises a head closing mark, which marks a closing of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of "rear" is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets "rear" to mean 'anywhere within'. Examiner further notes that since there Figure 4 shows that the 'HEADER FIELD' comprises HF1, HF2, HF3, and HF4, then HF4 must signal the end of the 'HEADER FIELD'), the apparatus comprising: a pickup which

detects a radio frequency signal from the disk (Figure 16, element 5); and a controller which controls the pickup and distinguishes the body from the head based on the first recognizer and the second recognizer (Figure 17, element 68).

Regarding claim 37, Tanoue discloses all the limitations of claim 36 as described in the claim 36 rejection above, and further that the recording unit further comprises a tail which is arranged behind the body (Figure 4, 'PA3', 'GUARD2', and 'BUFFER') and includes a third recognizer ('PA3').

Regarding claim 40, Tanoue discloses all the limitations of claim 36 as described in the claim 36 rejection above, and further that the second recognizer is located in a rear part of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of “rear” is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets “rear” to mean 'anywhere within').

Regarding claim 57, Tanoue discloses a method of recording data on a recordable information storage medium, the method comprising: recording data in recording units, wherein each of the recording units comprises: a body including user data (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA') and a first recognizer ('PS'); and a head which is disposed in front of the body ('HEADER FIELD') and includes a second recognizer other than the first recognizer that is unique such that the second recognizer cannot be detected from any other patterns in the body

(see Figure 4, elements 'HEADER FIELD', 'HF3', and 'HF4' – note that both HF3 and HF4 contain an address mark [see 'AM'] that is a unique violation pattern; see abstract; see also column 5, lines 32-43), wherein a number of maximum length patterns used to form the second recognizer comprises is greater than a number of maximum length patterns used to form the first recognizer so that the second recognizer is distinguishable from the first recognizer (see also column 5, lines 32-43; see also column 9, lines 12-16 – note that the address mark is 22T in length which is longer than any other pit), and the second recognizer is disposed in a rear part of the head and comprises a head closing mark, which marks a closing of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of "rear" is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets "rear" to mean 'anywhere within'. Examiner further notes that since there Figure 4 shows that the 'HEADER FIELD' comprises HF1, HF2, HF3, and HF4, then HF4 must signal the end of the 'HEADER FIELD').

Regarding claim 58, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that each of the recording units further comprises a tail which is disposed behind the body (Figure 4, 'PA3', 'GUARD2', and 'BUFFER') and includes a third recognizer ('PA3').

Regarding claim 61, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that the second recognizer is located in a

rear part of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that no definition of “rear” is found in the instant specification and also that no exact location is give in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets “rear” to mean ‘anywhere within’).

Regarding claim 62, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that a mark or a pit with a specific length is repeatedly recorded for a length of A number of bytes in the head for a data phase locked loop (column 5, lines 27-30).

Regarding claim 75, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that the user data is recorded in units of ECC blocks (see column 6, lines 17-23), the first recognizer is an ECC sync (see column 6, lines 17-23), the second recognizer is a head closing mark, which marks an end of the head (see Figure 4, elements 'HF3' and 'HF4' – Examiner notes that since there Figure 4 shows that the 'HEADER FIELD' comprises HF1, HF2, HF3, and HF4, then HF4 must signal the end of the 'HEADER FIELD'), and the third recognizer is a tail opening mark, which marks a start of the tail ('PA3').

Allowable Subject Matter

4. Claims 3, 4, 38, 39, 59, and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Please see reasons for indicating allowable subject matter in the previous Office Action, mailed on 7/27/2007.

Response to Arguments

5. Applicant's arguments filed 10/26/2007 have been fully considered but they are not persuasive.

Applicant argues on page 12 of the Response that Tanoue does not disclose that the head identifying pattern is disposed in the rear part of the head. Examiner respectfully disagrees. Examiner has re-written the rejection above with a different interpretation of the same art. Examiner notes that no definition of "rear" is found in the instant specification and also that no exact location is given in the instant specification. Therefore Examiner will interpret rear to be defined by the drawings, more specifically Figure 6, which clearly show that the second recognizer can be found anywhere in the head. Examiner therefore interprets "rear" to mean 'anywhere within'.

Further, Applicants argue that Tanoue does not disclose that the second recognizer comprises a head closing mark, which marks a closing of the head. Examiner respectfully disagrees. Examiner has re-written the rejection above with a different interpretation of the same art. Examiner notes that since there Figure 4 shows that the 'HEADER FIELD' comprises HF1, HF2, HF3, and HF4, then HF4 must signal the end of the 'HEADER FIELD'.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Aoki (US Pat. No. 7,301,889 B2) discloses an optical disc wherein the data linking is preformed while protecting the sync codes.
- b. Spruit et al. (US Pat. No. 7,038,991 B1) discloses a device for recording data units with a special linking technique.
- c. Stan et al. (US Pat. No. 6,856,585 B2) discloses a device for recording data units with a special linking technique.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on (571) 272-7582. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 1/17/2008



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER